

Applicants: Rene Hen et al.
Serial No.: 10/764,068
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application:

Listing of Claims:

1-66. (canceled)

67. (currently amended) A method for determining whether an agent increases brain progenitor cell division comprising ~~The method of claim 1 comprising the steps of:~~

- (a) administering to a non-human subject for several days to one month an the agent selected from the group consisting of trycyclics, selective serotonin reuptake inhibitors, selective norepinephrine uptake inhibitors, serotonin norepinephrine uptake inhibitors, alpha-2-adrenergic antagonists, growth factor receptor activators or modulators, NK1 antagonists, vasopressin V1B antagonists, mono-amino oxidase inhibitors, neuroleptics, antipsychotic inhibitors, GSK β 3 inhibitors and agents that upregulate the sonic hedgehog pathway ~~to the subject for a suitable duration of time;~~
- (b) administering to the subject a compound which is a marker of cell division;
- (c) sacrificing the subject after a suitable period of time 2 hours to 28 days;

- (d) quantitatively determining incorporation of the compound in the subject's brain tissue; and
- (e) comparing the amount so determined with the amount of compound in the brain tissue of a subject to which the agent was not administered,

the agent's ability to increase brain progenitor cell division being indicated when the amount of compound in the brain tissue of the subject to which the agent was administered is greater than the amount of compound in the brain tissue of the subject to which the agent was not administered.

- 68. (previously presented) The method of claim 67, wherein the subject is a mouse, rat or non-human primate.
- 69. (canceled)
- 70. (previously presented) The method of claim 67, wherein the compound of step (b) is bromodeoxyuridine.
- 71. (previously presented) The method of claim 67, wherein the subject's brain tissue in step (d) is hippocampal tissue or subventricular tissue.
- 72. (previously presented) The method of claim 67, wherein step (d) comprises the steps of: (i) perfusing the tissue with formaldehyde; (ii) sectioning the brain tissue; (iii) staining the tissue sections with anti-BRDU antibody; and (iv) counting the cells labeled with anti-BRDU antibody.
- 73-88 (canceled)

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89. (currently amended) The method of claim 67 ~~88~~, wherein the agent upregulates the sonic hedgehog pathway.
90. (previously presented) The method of claim 89, wherein the agent is an antagonist of Patched protein in the sonic hedgehog pathway.
91. (previously presented) The method of claim 89, wherein the agent is an agonist of Smoothed protein in the sonic hedgehog pathway.
92. (previously presented) The method of claim 89, wherein the agent is selected from the group consisting of Hh-Ag 1.1, Hh-Ag 1.2, Hh-Ag 1.3, or a derivative of Hh-Ag 1.1, Hh-Ag 1.2 or Hh-Ag 1.3.